Land Processes Distributed Active Archive (LP DAAC)
Status Update

User Working Group
August 11-12, 2010

Tom Sohre, USGS
LP DAAC Project Manager

Topics

- Data Distribution Trends
- Online Archive
- ASTER Global DEM
- ASTER Cloud Cover Scores
- ASTER / MODIS Data Access
- Outreach / User Support
- Near-term Objectives

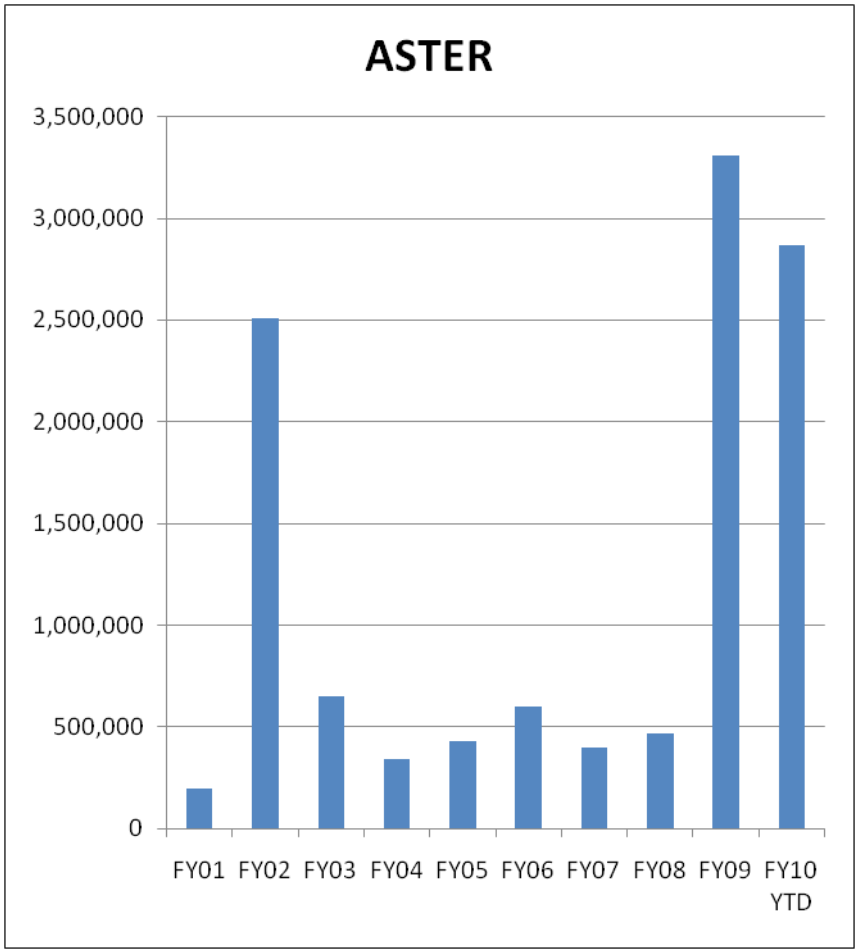
Terra @ 10

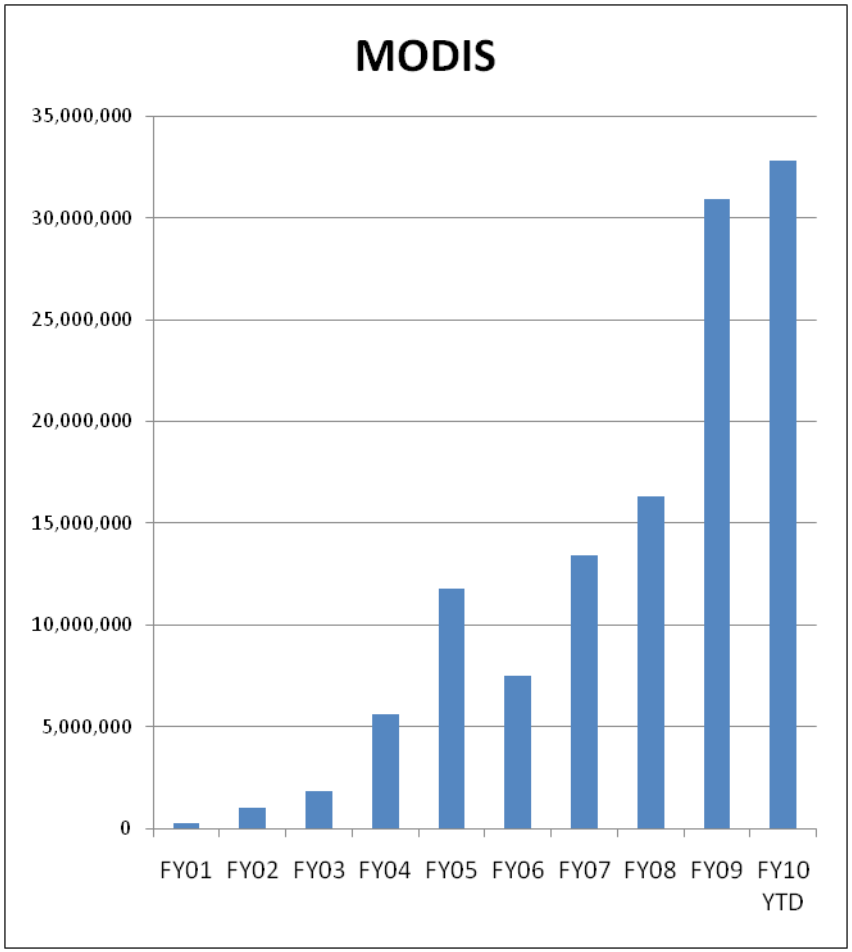
NASA's Land Processes Distributed Active Archive Center (LP DAAC) is celebrating its 10th year as the archive and distribution site for land products from the Earth Observing System (EOS)Terra spacecraft.

Moderate Resolution Imaging Spectroradiometer (MODIS) and Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) products were first released publicly from the DAAC in 2000.

The mission to date is being celebrated at EROS with a lobby poster display in conjunction with the DAAC's annual User Working Group Meeting August 11-12. The posters present applications using these valuable global change products over the past ten years.

LP DAAC Science Data Distribution (Files)





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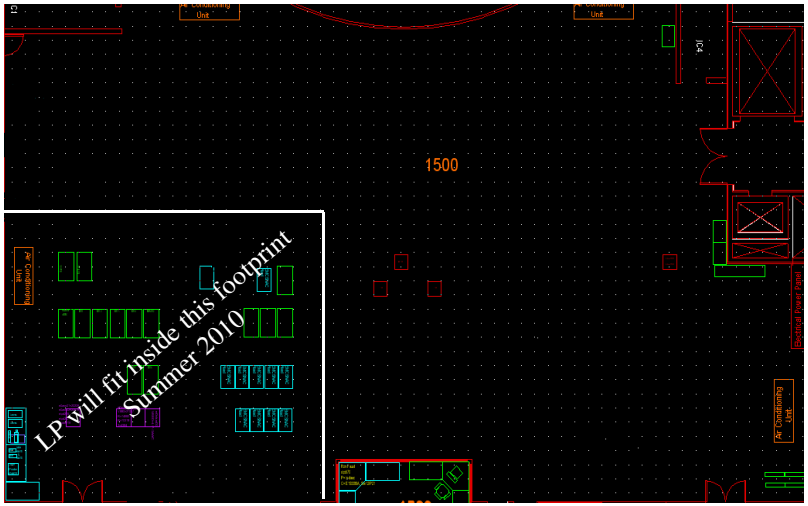
LP DAAC Online Archive

- Increased DataPool storage to ~1.5 PB useable
- Primary copy of all LP DAAC data holdings on spinning disk (online) rather than on tape (near-line or offline)
- Secondary (Backup) copy on Tape
- Reduced Computer Room footprint from 1/2 down to approx. 1/6

- Key Enabler:
  - Increased data demand
  - Enhanced services on the data



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Wide Area Network Traffic

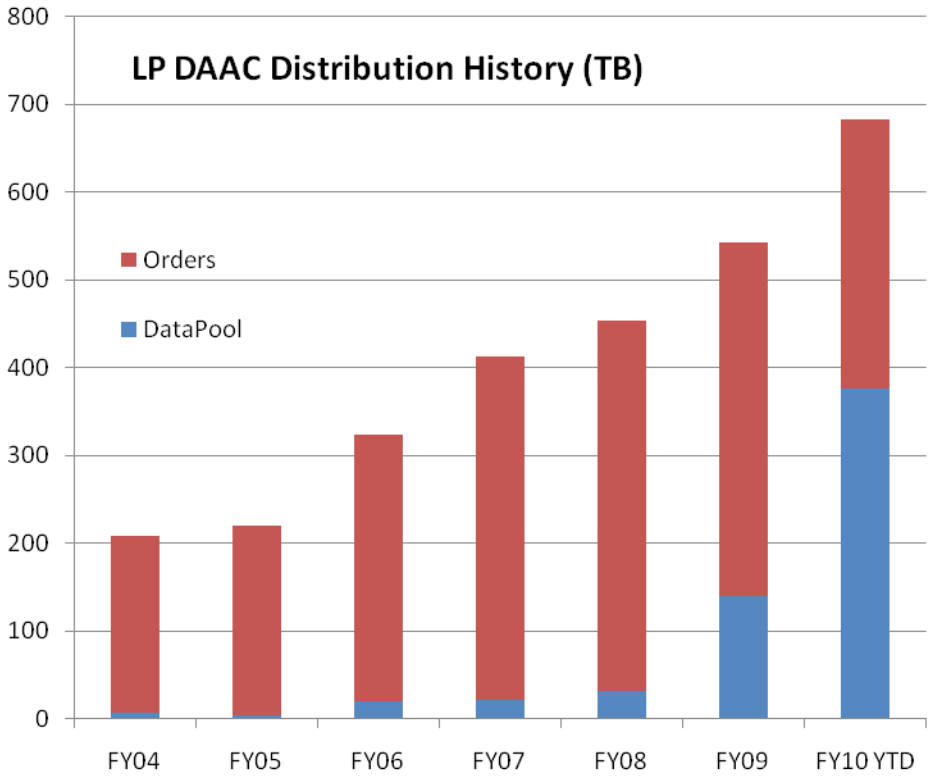
- On 10 July 2010, EROS had 9.47 TB of traffic in/out
  - Approx. 1 year ago, EROS had a peak volume of 5.9 TB

- Distribution:
  - LPDAAC: 2.6 TB
  - Landsat: 3.6 TB

  } 6.1 TB of 7.32 TE
- Ingest:
  - LPDAAC: 1.3 TB
  - Landsat: 0.21 TB

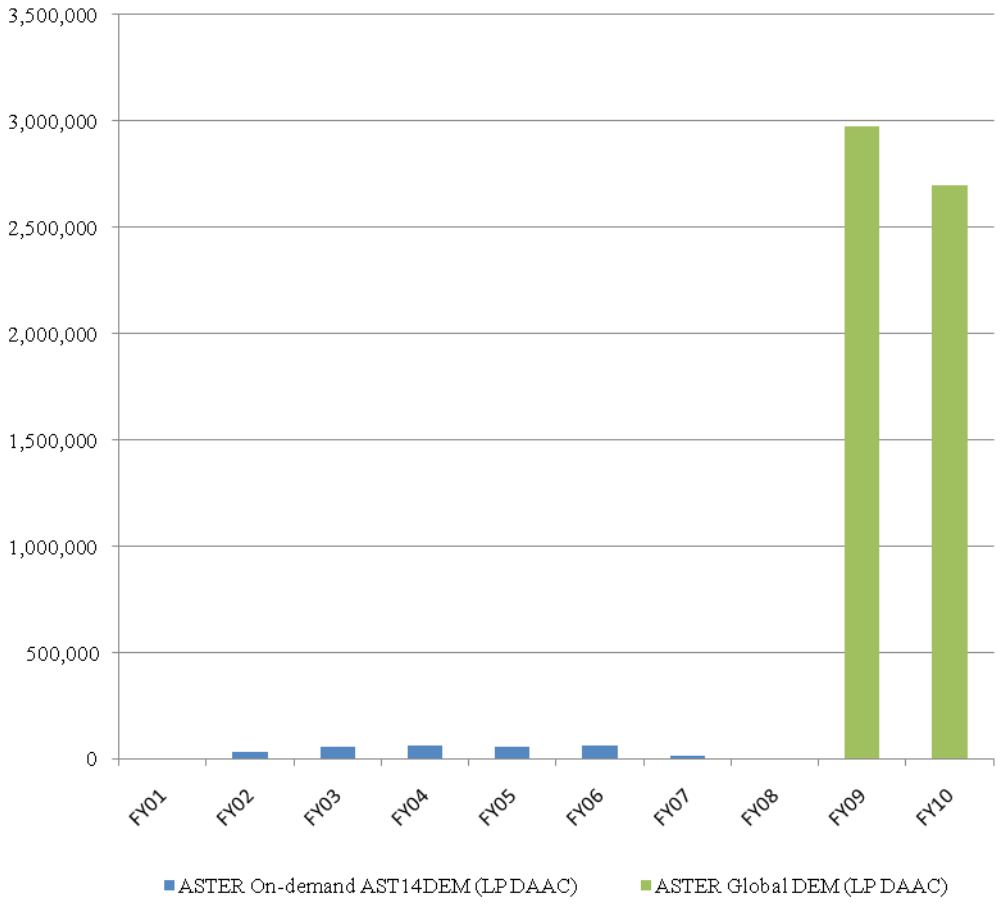
  } 1.5 TB of 2.15 TE Total

- Distribution to:
  - Google – 3.2 TB
  - Ames – 0.66 TB
  - Universite Catholique de Louvain – 0.57
  - U. Oklahoma – 0.55 TB
  - NTT (Japan) – 0.50 TB
  - China Science & Technology Network –



ASTER Global DEM

- **Demand**
  - **Approx. 6 million tiles distributed to date at LP**
  - **53 Hard Drive distributions**
- **GEO DSTF Case Study**
- Registration
  - Data usage
  - Areas of Interest
- Future…
  - GDEM Explorer
  - GDEM V2



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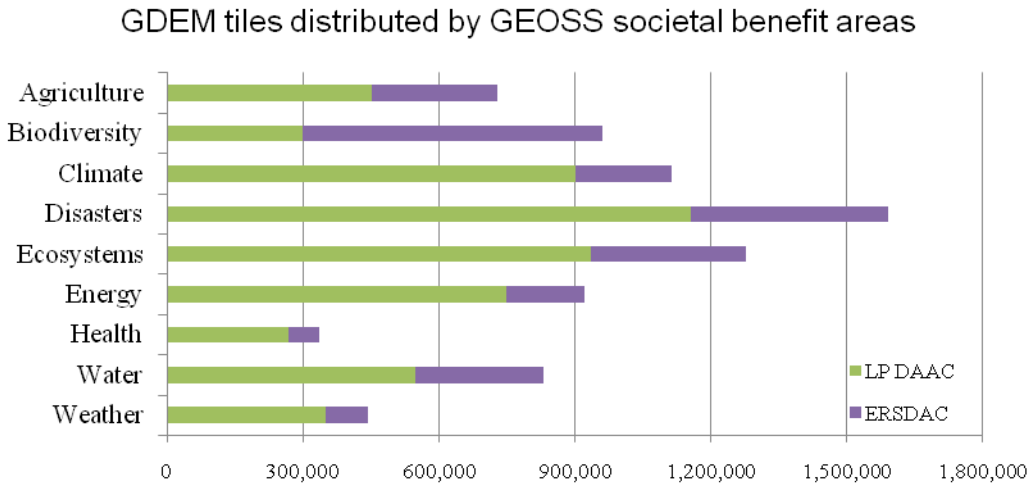

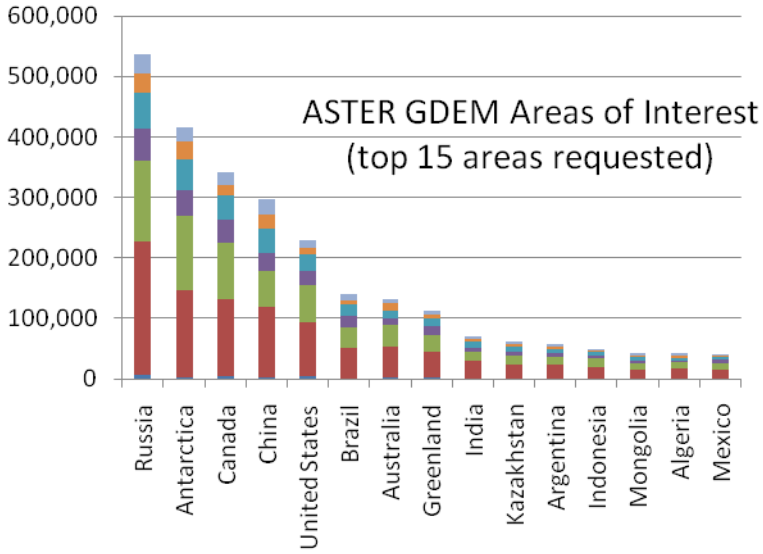

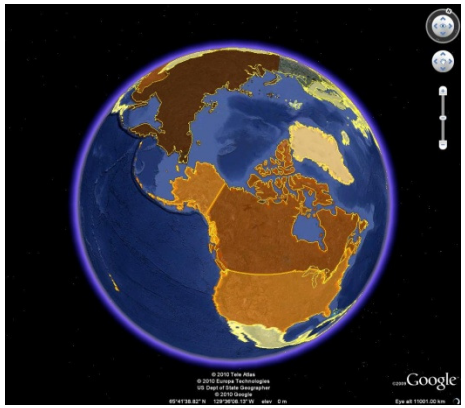

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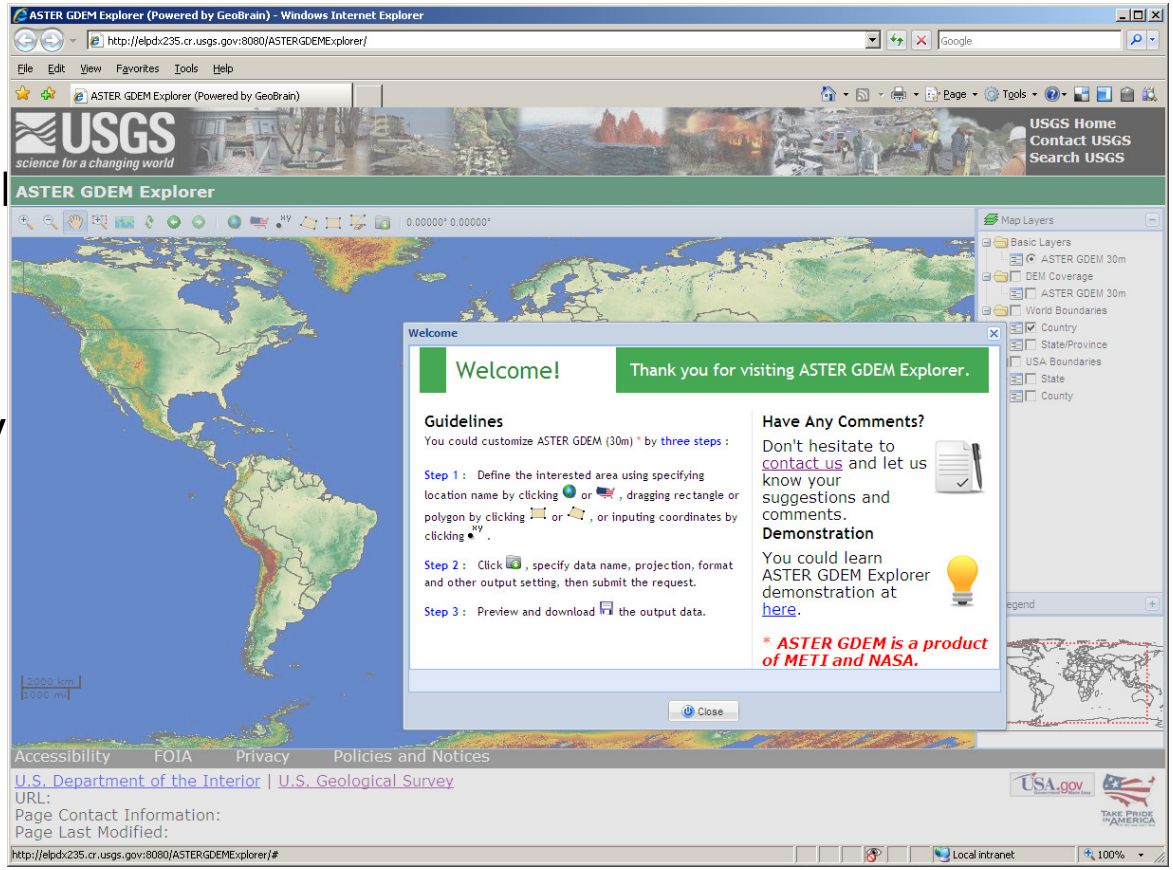
  - **GDEM V2**
  - **GEOSS User Registration**
  - **GDEM Explorer**



ASTER Cloud Cover Metadata

- Archived ASTER cloud cover scores have been historically inaccurate
  - More accurate information available based upon MODIS MOD35 Cloud Mask
- Collaboration with Ibaraki University and ERSDAC
- LP DAAC Search Interfaces (WIST, GloVis) utilize updated cloud values

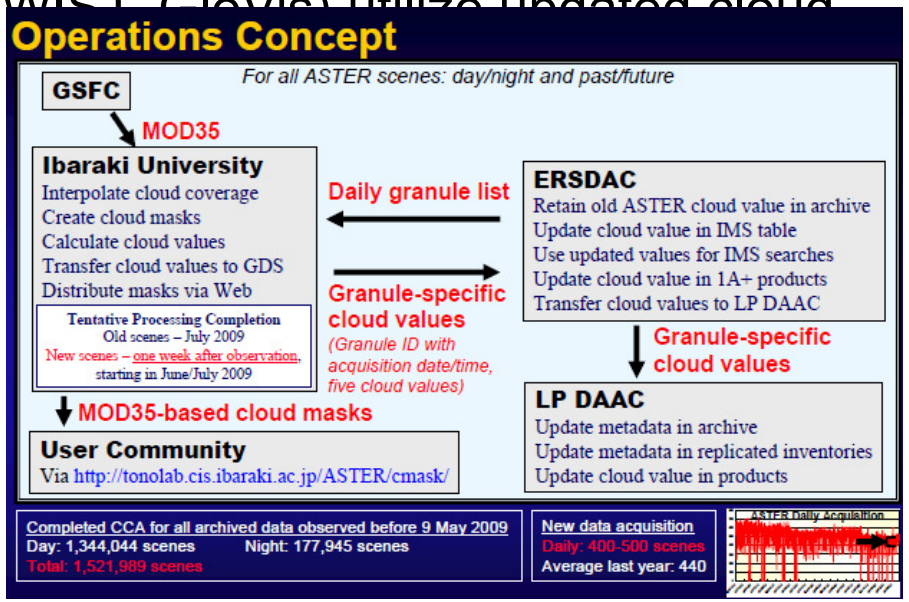
Dates:

January 2010

- Daily cloud value updates initiated with ERSDAC

March 2010

- Historical archive cloud values updated



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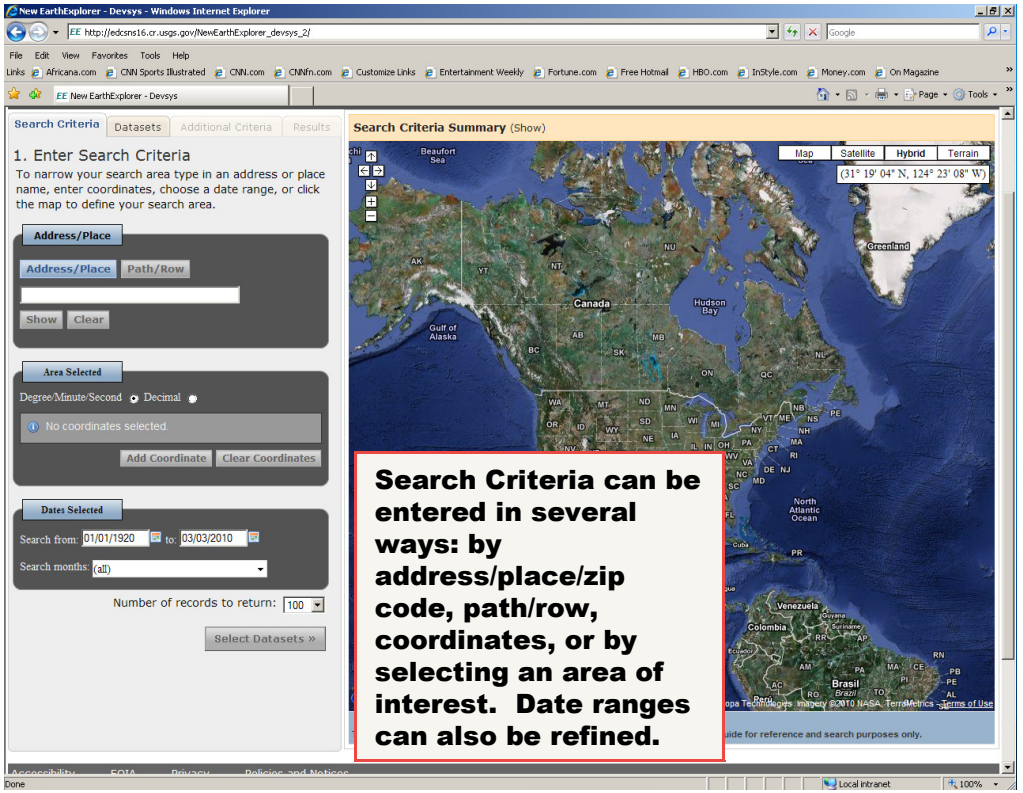
Leveraging USGS “New Earth Explorer”

New Earth Explorer

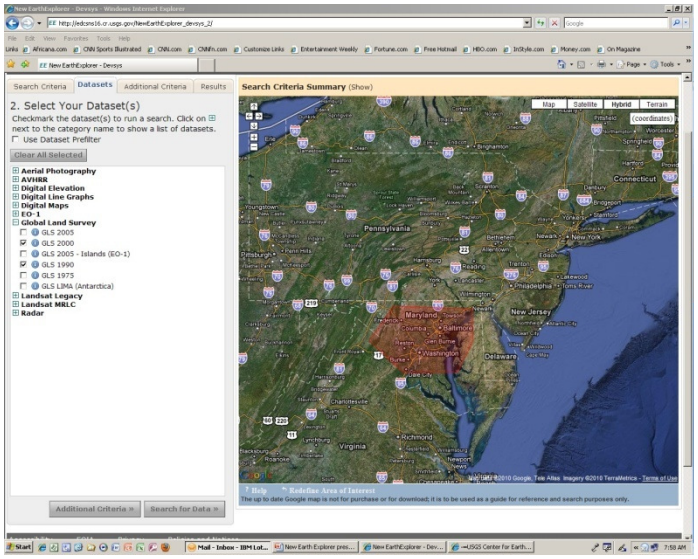
- Future LDCM data access client
- Cross-dataset search/access
- Direct download from archive
- ASTER L1B U.S. available now

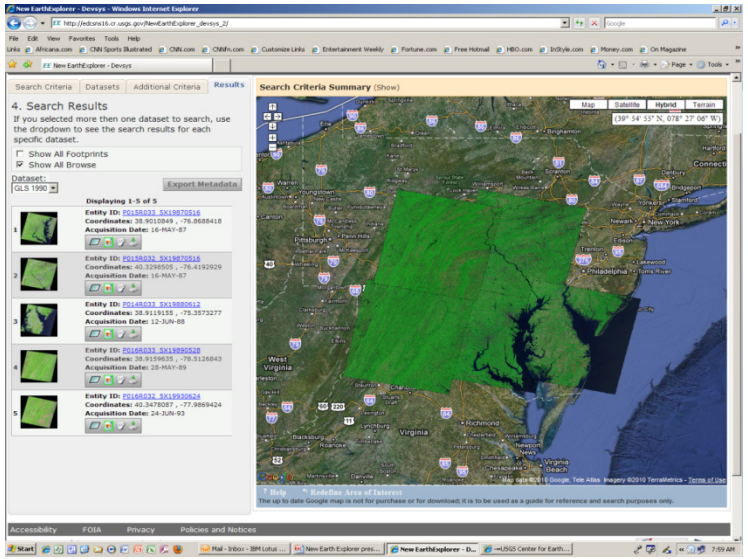
New Earth Explorer 2.0 Features

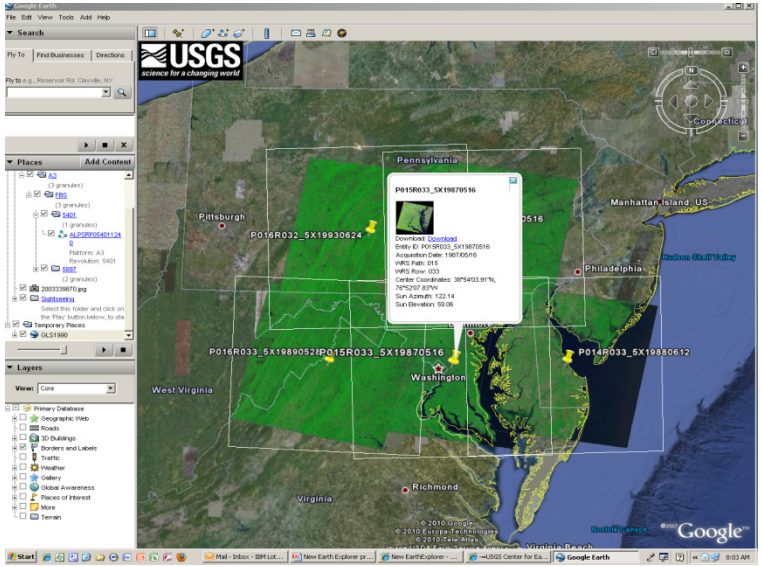
- Map viewer for viewing overlay footprints and browse overlays.
- Full Resolution Browse display capability.
- Provides KML access through Google Earth.
- User authentication service through user registration and validation routines.
- Allow multi-point polygon and point searches.
- Add on-demand products to an item selection basket.
- Supports standard product downloads.
- XML, KML, CSV, FGDC, Shape file export options.
- http://edcsns17.cr.usgs.gov/NewEarthExplorer/



New Earth Explorer 2.0 Released Features







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Additional Data Access Updates

- ASTER
  - Expanding ASTER L1B over U.S. and Territories
  - Clarifying ASTER Access mechanisms
    - ERSDAC Tutorial
    - NASA Affiliated Research and Educational Users
  - Encouraging “Free and Open” policy

- MODIS
  - Additional MODIS datasets available through GloVis and MRTWeb

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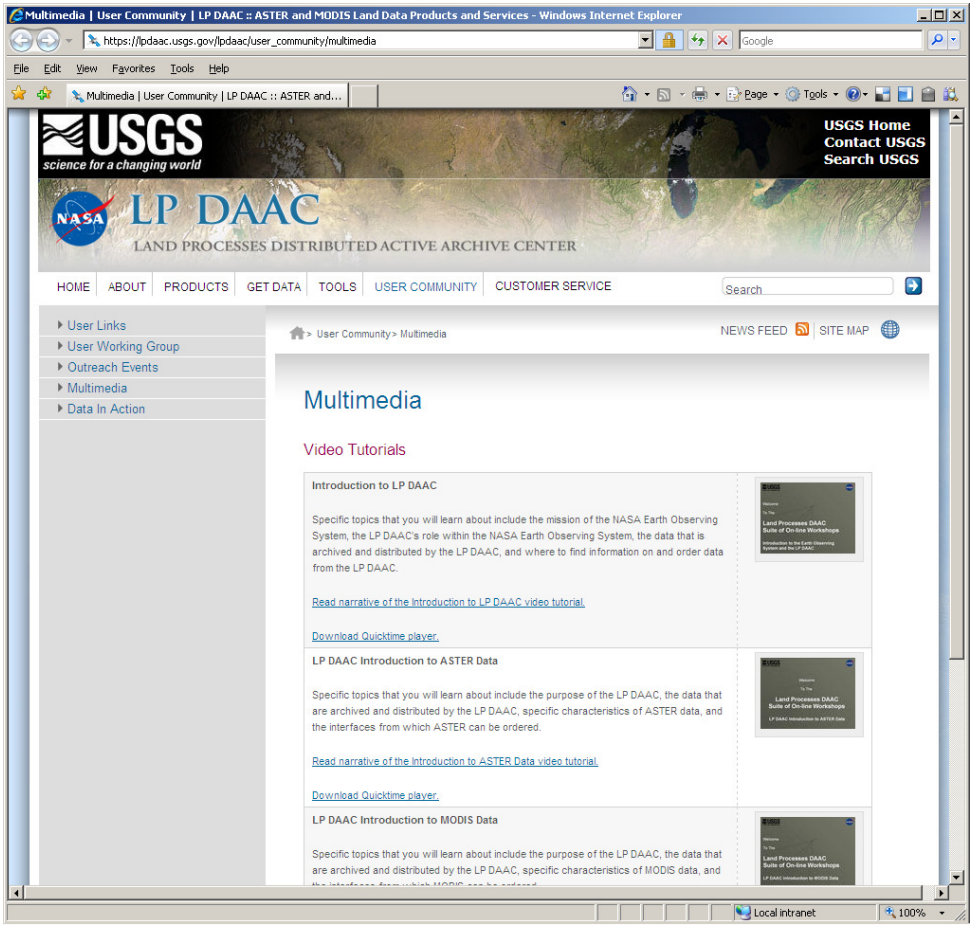
LP DAAC Outreach

- Provided support at (7) conferences during FY10
  - (3) in support of OneData booth
  - (3) in support of OneNASA booth
  - (1) NASA support
- Investigating new methods of reaching users
  - Online multimedia
  - Social Media



LP DAAC External Collaborations

- ASTER and MODIS Science Teams
- HyspIRI, DesDynI Science Working Groups
- Landsat / LDCM Science Team Affiliate
- Federation of Earth Science Information Partners (ESIP)
- Earth Science Data System Working Group (ESDSWG)
- Earth Observing Missions Applications Workshop
- Earth Science Technology Forum
- ESDIS Data Center Manager's Meeting
- User Services Working Group
- User Working Groups (NSIDC, ORNL, ASF)

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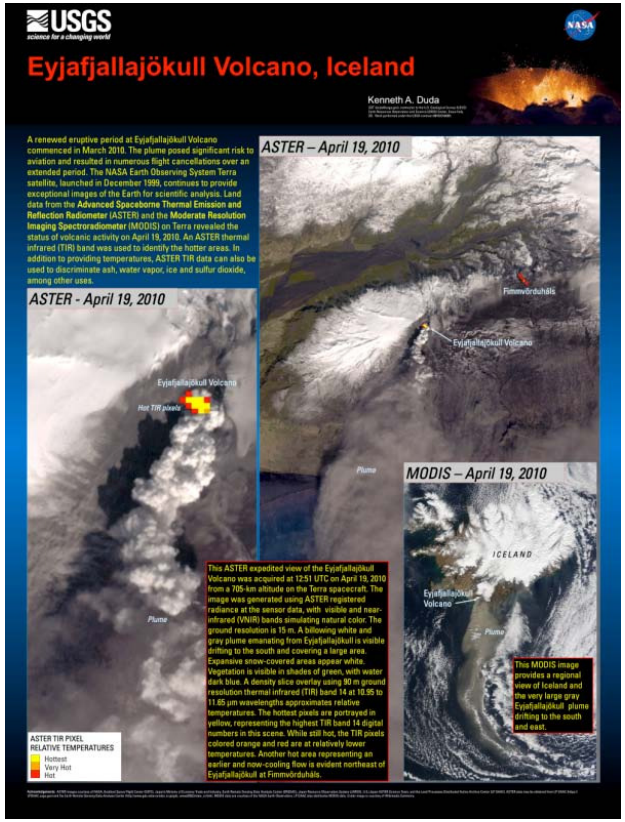
LP DAAC Emergency Response Support

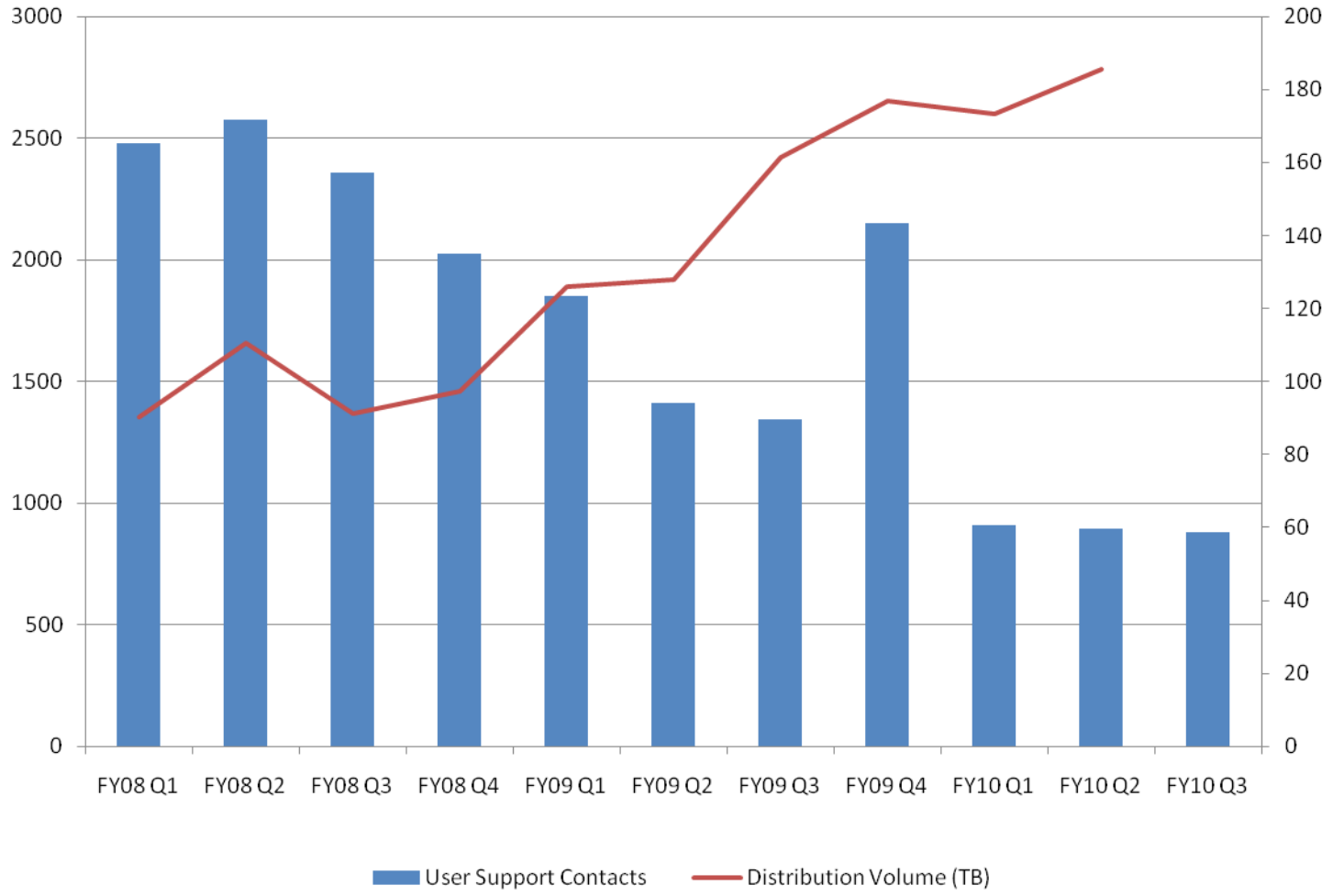
- Coordination of ASTER tasking
- ASTER Expedited data processing and distribution
- Coordination with USGS Emergency Response Team



Examples of recent Emergency Response Support

- Pakistan flooding
- Haiti earthquake
- U.S. Gulf of Mexico oil spill
- Pakistan Hunza River Landslide Dam
- Eyjafjallajökul Volcano, and numerous other volcanoes
- Chile earthquake
- Antarctic Mertz Glacier
- Uganda landslide
- Machu Picchu region flooding
- Guatemala Lake Atitlan contamination
- Philippines Manila tropical storm flooding

LP DAAC User Inquiries



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Near-Term Objectives

- MODIS V006 Re-processing Campaign
- Technology Infusion
  - Collaborations with MODAPS, GES, and ORNL
  - Cross data center search/access, Web services
- NASA User Registration Implementation
- MEaSUREs data in Archive

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